

# GUIDELINES FOR A WRITTEN REPORT

Every written report, article summary – henceforth called “paper” for simplicity – requires a clear leading thread (“Roter Faden”) running through it. The paper has to tell a story, which in the ideal case is also instructive.

## BEFORE YOU START WRITING

Write down in bullet points the story you want to tell. For this, think about motivation of the work, the activities, methods, results you want to describe, interpretation of results and possible points for discussion. Order your bullet points and evaluate them critically, especially the relation between motivation and results. Before writing, it is possible to adapt the motivation. Only when you have finished your concept start writing (and creating elaborate graphics).

## BASIC STRUCTURE

*INTRODUCTION.* It is necessary to pick up the reader from a common (scientific) ground and to motivate him to spend time reading the paper. This means the paper should create interest. Basic terms and concepts need to be explained and the scientific context of the paper set in order to facilitate the reader understanding the paper. This description should represent the current state of the art in research and technology. Be careful not to exaggerate and not to drift to irrelevances. After this “briefing”, the contribution of the paper to the research topic (the novelty of the work) is explained. Based on this the reader will decide how much time he will dedicate to the paper.

*SETUP/ METHOD DESCRIPTION.* Here starts the description of the author’s work. Only the applied methods including the experimental or simulated setup should be described without anticipation of results. This separation helps enormously to keep structure and comprehensibility.

*RESULTS.* Following the methods and setup, the results can be presented in different forms, e.g. raw data that allow easily seeing the connection to the method. This is the opportunity to describe possible artifacts of the results. Henceforth, the data can be presented in a more elaborate or further evaluated way in order to illustrate relationships that are more complex. This further elaborated data form the base for the discussion.

*DISCUSSION.* It is important to reflect critically about the own work. This is the part of the paper to write about weaknesses and strengths of the results and methods. This part of the text is the section where results are interpreted and where statements and theories or explanations for the results can be evolved.

*CONCLUSION.* The paper should find a proper end. This depends on the kind of work. A more technical paper can summarize the reached specifications of the developed device or method. It can also show the ways to further improve it or tell about new application possibilities of the work. However, depending on the discussion, this part can also be simply a closing comment or a summary.

## GENERAL POINTS TO CONSIDER

- Use simple sentences, especially when writing in English. Mainly Main clauses.
- Unambiguous choice of terms, always use the same term for the same thing; repetitions are not a problem.
- For graphics: Resolution min. 300 dpi. Label axes! Labels min 80% of font size of the text and the same font for all graphics. Captions need to explain the graphic. If it gets too long, include the description in the main text.
- Every graphics needs to have a reference in the written text.